

TMDL APPROACH



Loading Capacity

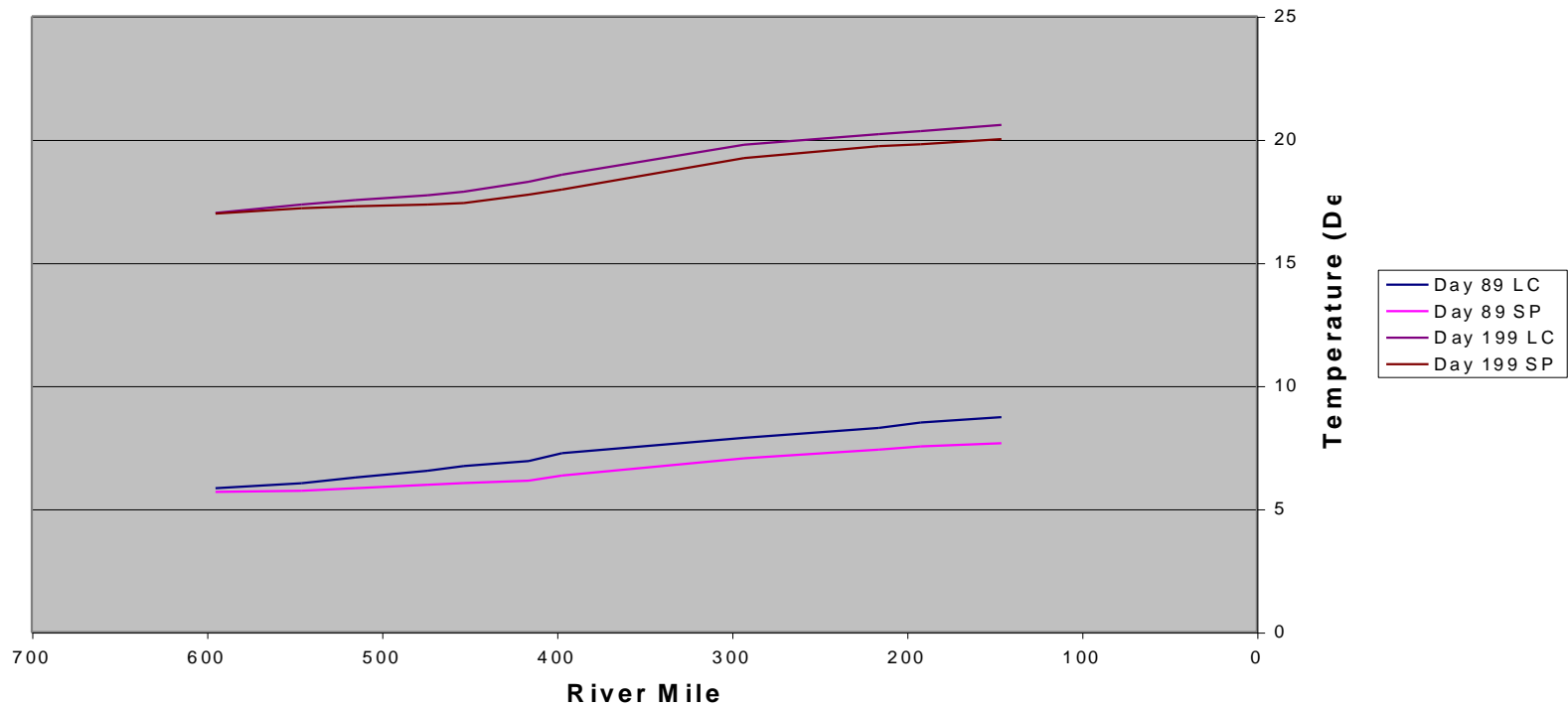
- Based on the **Average Site Potential Temperatures (SP)** for each day of the year.
- Loading Capacity @ Grand Coulee Target Site =
 - SP + 0.15 C when $SP < \text{Criteria}$
 - SP + 0.02 C when $SP > \text{Criteria}$

Loading Capacity

- Loading Capacity at each subsequent target site =
 - upstream Loading Capacity + 0.15 C when $SP < \text{Criteria}$
 - upstream Loading Capacity + 0.02 C when $SP > \text{Criteria}$

Loading Capacity

Loading Capacity and Site Potential Along the Columbia



Load Available for Allocation

- $0.15 C$ when $SP < \text{Criteria}$
- $0.02 C$ when $SP > \text{Criteria}$
- Loads are driven by the downstream WQS
 - $SP + 0.14$ when $SP > \text{Criteria}$ (Oregon)
 - $SP + 1.1$ when $SP < \text{Criteria}$ (Washington)

Load Available for Allocation

What does it mean?

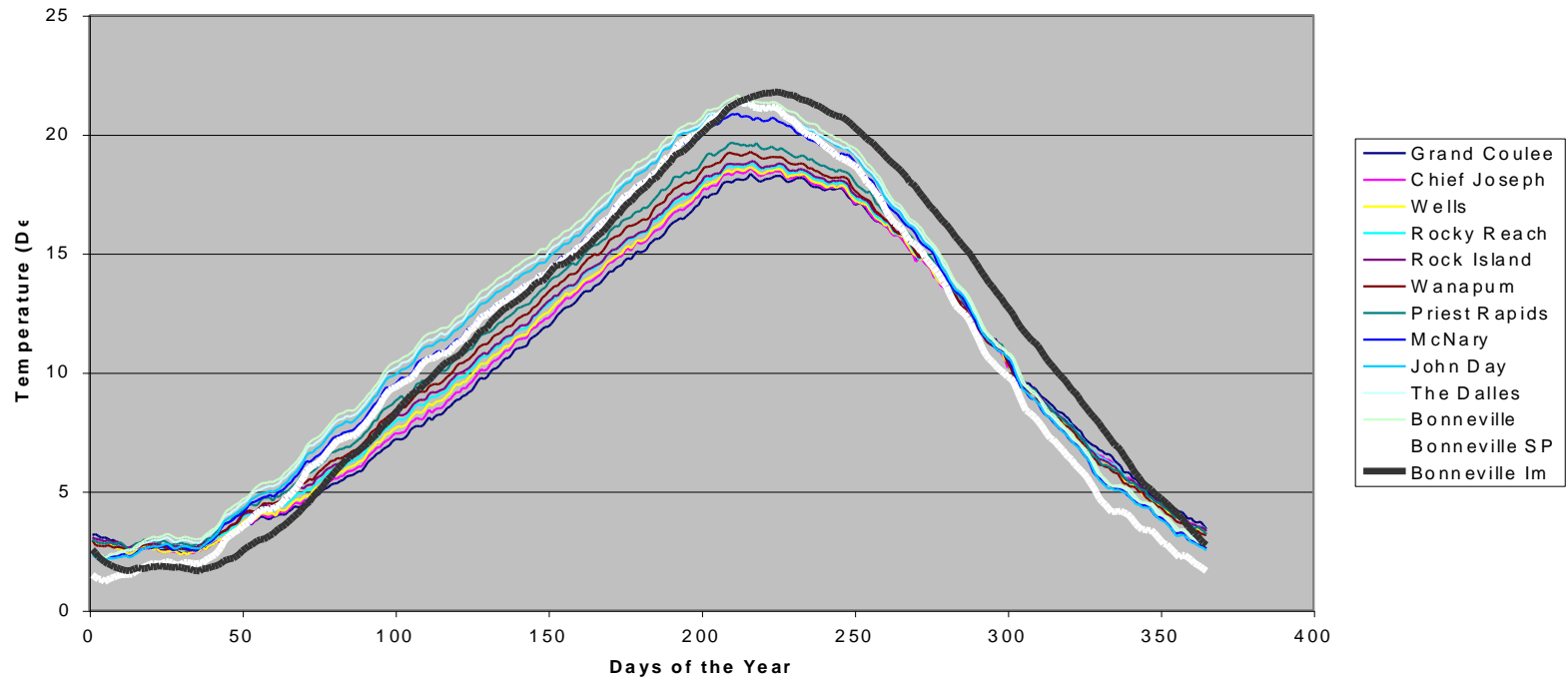
- Essentially no measurable increase in temperature at each Target Site due to dams or other sources.
- Sufficient capacity for the point sources.

Allocation Table

Day	Upstream LC	LC	Increment	Dams Allocation	Other Sources	Future Growth
89	5.9	6.05	.15			
199	17.29	17.31	.02			

Loading Capacities

Columbia TMDL at each Target Site with the Bonneville Site Potential and Impounded



Further Analysis

- Point Sources
- Tribes
- Future Growth

Temperature Decreases

Temperature Improvement Needed at each Target Site - Columbia

